

REMARKS

I. Summary of Office Action

Claims 1-24 were pending in the above-identified patent application. Claims 11-24 have been withdrawn as being directed to an unelected invention.

Claims 1-10 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 1-10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Owen et al. U.S. Patent No. 4,876,660 (hereinafter "Owen").

II. Summary of Applicants' Reply

Applicants have amended claims 1, 4, 5, and 8 to more particularly define the claimed invention. The amendments are fully supported by the application as originally filed, and therefore no new matter has been added.

The rejections of applicants' claims are respectfully traversed.

III. Applicants' Reply to the § 101 Rejection

The Office Action maintains the 35 U.S.C. § 101 rejection of claims 1-10 because, according to the Office Action, these claims do not disclose "a practical/physical application" and are thus directed to non-statutory subject matter. See Office Action, page 2. In addition, the Advisory Action states that the practical application of zeroing or initializing an accumulator value is not "clearly or directly seen" in the claims. See Advisory Action, page 2. Applicants respectfully disagree.

Applicants previously amended independent claims 1 and 8 to recite that the result of the accumulate operation is stored for use as an accumulator value. Applicants have now further amended the claims to recite that the value is stored for use as an "initialized or zeroed" accumulator value. Applicants respectfully submit that the claims now clearly recite a practical and useful application.

As explained in applicants' specification, applicants' claimed invention advantageously allows for an accumulator value to be initialized or zeroed with minimal latency. See specification, ¶¶ 0007 - 0009. As such, applicants submit that independent claims 1 and 8 recite a useful, concrete, and tangible result -- namely methods for initializing or zeroing an accumulator value with minimal latency. A value stored for use as a zeroed or initialized accumulator value is at least as useful, concrete, and tangible as "a final share price momentarily fixed for recording and reporting purposes," which was upheld by the Federal Circuit as being directed toward statutory subject matter. See *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368, 1373 (Fed. Cir. 1998).

Moreover, applicants' have amended independent claims 1 and 8 to recite that the accumulate operation is performed in the same clock cycle as the concatenating step. As such, applicants' claimed invention advantageously provides for a more flexible accumulator whose accumulator value can be zeroed or initialized to a non-zero value with minimal or no clock latency. This is clearly a useful result. For the foregoing reasons, applicants respectfully request that the 35 U.S.C. § 101 rejection of claims 1-10 be withdrawn.

IV. Applicants' Reply to the § 102 Rejection

The Office Action rejected claims 1-10 as being anticipated by Owen. Owen refers to a fixed-point multiplier-accumulator architecture. See Owen, Abstract. Owen's FIG. 6a shows a functional block diagram of an emitter-coupled logic (ECL) multiplier-accumulator. See Owen col. 7, 47-61; col. 9, ll. 19-61; and FIG. 6A.

Applicants have amended independent claims 1 and 8 to recite that an accumulate operation is performed in the same clock cycle as the concatenating step. This is possible, for example, because "[t]he accumulator value can be zeroed or initialized using circuitry in the MAC block that is typically not used during a multiply-and-accumulate operation" (Specification, ¶ 0008). As noted in applicants' specification, "known MAC blocks [like Owen's] do not allow for the accumulator value to be initialized to a non-zero value with minimum clock latency" (Specification, ¶ 0005).

The Examiner contends that Owen "clearly and equivalently" shows the step of concatenating each signal of the first pair of input signals and the feedback output. See Office Action, page 7. Regardless of whether Owen shows this claimed feature, applicants submit that Owen fails to show or suggest performing any accumulate operation in the same clock cycle as the concatenating step.

For at least the foregoing reasons, applicants submit that independent claims 1 and 8 are allowable over the prior art of record. Dependent claims 2-7, 9, and 10 are allowable for at least the same reasons. Applicants

respectfully request, therefore, that the rejection of claims 1-10 under 35 U.S.C. § 102 be withdrawn.

V. Conclusion

Applicants respectfully submit that this application, including claims 1-10, is now in condition for allowance. Accordingly, prompt consideration and allowance of this application are respectfully requested.

Respectfully submitted,

/Brian E. Mack/

Brian E. Mack
Reg. No. 57,189
Agent for Applicants
ROPES & GRAY LLP
Customer No. 36981
1211 Avenue of the Americas
New York, New York 10036-8704
Tel.: (212) 596-9000